

### **Amendments to the Drawings**

The attached sheet of drawing includes changes to FIG. 1. The sheet replaces the original sheet that includes FIG. 1. In FIG. 1, a representative box previously labeled as “fan” is re-labeled as “fan and fan controller” and the box labeled “Fan Controller” is removed.

Attachment: Replacement Sheet containing FIG. 1

## **REMARKS**

Claims 1-3, 5-11, 13-15, 17-24, 26, and 28-33 are pending and stand rejected. Claim 16 is canceled by way of this Amendment. All pending claims, as amended, are believed to be allowable over the references cited by the Examiner as discussed below. Accordingly, a Notice of Allowance for the present application is respectfully requested.

### **Objections to the Drawings**

With respect to FIG. 1, the representative box previously labeled as “fan” is re-labeled as “fan and fan controller” and the box labeled “Fan Controller” is removed.

With respect to the facility of claim 33, it is noted that in paragraph [0016] of the specification, **FIG. 1** is described as being a schematic diagram of an illustrative computing facility.

Withdrawal of the objections to the drawings is respectfully requested.

### **Objections to Claim 16**

Claim 16 is canceled. Withdrawal of the objections to the claim is respectfully requested.

### **Rejections Under 35 U.S.C. §103**

Claims 1, 2, 5, 7-9, 11, 23, 26, 28-30, 32 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chu 770 in view of Beitelmal.

Independent claim 1 generally recites a system that includes a separate fan controller corresponding to each fan, each fan controller being configured to variably control a speed of the corresponding fan according to at least one of a temperature within the corresponding space and a temperature of at least one of the at least one electronic component mounted within the corresponding space. Similarly, independent claim 23 generally recites a method that includes moving air by variably controlling a fan speed of a fan disposed in each space according to at least one of a temperature within the corresponding space and a temperature of at least one of the at least one electronic component mounted within the corresponding space.

As noted by the Examiner, Chu 770 fails to disclose or suggest a fan controller corresponding to each fan that is configured to variably control a speed of the corresponding fan

according to at least one of a temperature within the corresponding space and a temperature of at least one of the at least one electronic component mounted within the corresponding space.

The Examiner relies on Beitelmal as teaching the use of a fan controller to control a speed of the fan (paragraph [0033] of Beitelmal). The Examiner notes that the claims do not require a separate fan controller for each fan disposed in each of the spaces. However, while the use of a fan controller to control a speed of the fan may be known in the art, the use of a temperature of a corresponding space and/or a temperature of an electronic component mounted within the corresponding space *to control the individual speed of each fan* is neither disclosed nor suggested by Beitelmal.

Regardless of how the speed of each fan is controlled, the claims do explicitly recite that each fan is such that its speed is variable controlled according to a temperature within the corresponding space and/or a temperature of at least one of the electronic components mounted within the corresponding space. Such a feature is neither disclosed nor suggested by Chu 770 or Beitelmal, either taken alone or in combination.

Specifically, Beitelmal discloses using one or more fans or blowers that can vary the speed with which air is moved *within an entire rack system*.

The Examiner contends that FIG. 1 of Beitelmal clearly teaches a pair of fan controller 50 and a corresponding fan (blower) for each. However, the blowers 14 in Beitelmal are provided for cooling the same space and as such, does not read on the claims that specify that the speed of each fan is variably controlled according to a temperature of a space corresponding to the particular fan and/or a temperature of an electronic component mounted within the corresponding space.

Furthermore, Beitelmal fails to disclose or suggest varying the air speed through each of a plurality of spaces within the rack system. For example, Beitelmal states that the blower is “configured to supply cooling fluid, e.g., air, through a *centralized plenum* and thereafter through a plurality of nozzles to the components of the electronic system.” (Paragraph [0018].) As is evident, the blower is provided upstream of the plurality of nozzles and the blower does not and cannot control the speed of the air delivered to each nozzle.

Beitelmal further states: “The rack system 10 also includes a plurality of blowers 14 [see, for example, FIGS. 1 and 2 of Beitelmal] operable to draw fluid from outside the enclosure 12 and deliver the fluid to the space within the enclosure. The blowers 14 are variable speed

blowers because they are configured to vary the amount of cooling fluid delivered to the components within the rack system 10. ... [T]he blowers 14 may comprise any reasonably suitable blower that is capable of varying the amount of fluid delivered *to the space within the enclosure.*" (Paragraph [0020].)

As is clearly evident, Beitelmal fails to disclose or suggest the use of a separately controlled fan in each of a plurality of spaces.

Accordingly, withdrawal of the rejection of independent claims 1 and 23 as well as claims dependent therefrom under 35 U.S.C. §103(a) is respectfully requested.

Claims 3, 6, and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chu 770 in view of Beitelmal and further in view of Chu 412.

However, dependent claims 3, 6, and 24 are believed to be allowable at least because the independent claims 1 and 23 from which they variously depend are believed to be allowable as discussed above. Withdrawal of the rejection of dependent 3, 6, and 24 claims under 35 U.S.C. §103(a) is respectfully requested.

Claims 13, 14, and 17-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chu 770 in view of Kubota and further in view of Beitelmal.

However, similar to independent claims 1 and 23, independent claim 13 recites a system that includes means for variably controlling a speed of each fan according to at least one of a temperature *within the corresponding space* and a temperature of at least one of the at least one electronic component mounted *within the corresponding space*.

Because the addition of Kubota does not overcome the deficiency of Chu 770 (or Chu 770 in view of Beitelmal), withdrawal of the rejection of independent claim 13 as well as claims dependent therefrom under 35 U.S.C. §103(a) is respectfully requested.

Claim 15 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chu 770 in view of Kubota in view of Beitelmal and further in view of Chu 412.

Claims 10 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chu 770 in view of Beitelmal and further in view of Zhu.

However, these dependent claims are believed to be allowable at least because the independent claims 1, 13, and 23 from which they variously depend are believed to be allowable as discussed above. Withdrawal of the rejection of these dependent claims under 35 U.S.C. §103(a) is respectfully requested.

### **CONCLUSION**

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

In the unlikely event that the transmittal letter accompanying this document is separated from this document and the Patent Office determines that an Extension of Time under 37 CFR 1.136 and/or any other relief is required, Applicant hereby petitions for any required relief including Extensions of Time and/or any other relief and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. **50-1217** (Order No. **GOOGP022**).

Respectfully submitted,



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